

IN THE CLAIMS

Please amend the claims as follows:

1-20 (Cancelled)

21 (Currently Amended): A cell that has been transformed with one or more polynucleotides which encode at least three different fusion proteins,  
wherein each fusion protein comprises a different fluorescent protein and different polypeptide involved with cell division,  
wherein ~~at least one fusion protein comprises a spindle polypeptide~~  
each of the fusion proteins provides a different type of fluorescence so that three or more types of cell structures can be fluorescently observed,  
wherein at least one of the polypeptides involved in cell division is a spindle polypeptide selected from the group consisting of  $\alpha$ -tubulin and  $\beta$ -tubulin, and  
wherein said fusion proteins are expressed at a level sufficient to permit their visualization ~~during~~ through the process of cell division.

22 (Previously Presented): The cell of claim 21, wherein the at least three fusion proteins each comprise a different fluorescent protein selected from the group consisting of a green fluorescent protein, a cyan fluorescent protein, a red fluorescent protein and a yellow fluorescent protein.

23 (Previously Presented): The cell of claim 21, which comprises at least one fusion protein comprising a nucleus or chromosomal polypeptide.

24 (Previously Presented): The cell of claim 21, which comprises a fusion protein containing a histone H3 or a histone H2B polypeptide.

25 (Previously Presented): The cell of claim 21, which comprises a fusion protein containing a nuclear membrane polypeptide.

26 (Previously Presented): The cell of claim 21, which comprises a fusion protein containing importin  $\alpha$ , lamin B, or nuclear lamin A precursor recognition factor (NARF) polypeptide.

27 (Previously Presented): The cell of claim 21, which comprises a fusion protein containing a centrosome polypeptide.

28 (Previously Presented): The cell of claim 21, which comprises a fusion protein containing an aurora A or  $\gamma$ -tubulin polypeptide.

29-30 (Cancelled)

31 (Previously Presented): The cell of claim 21, which comprises a fusion protein containing a heterochromatin polypeptide.

32 (Previously Presented): The cell of claim 21, which comprises a fusion protein containing a heterochromatin protein 1, aurora B, survivin, SNF2b, BRG1, or Suv39h1 polypeptide.

33 (Previously Presented): The cell of claim 21, which comprises a fusion protein containing a cytoskeleton polypeptide.

34 (Previously Presented): The cell of claim 21, which comprises a fusion protein containing an actin polypeptide.

35 (Previously Presented): The cell of claim 21, which comprises a fusion protein containing a telomere polypeptide.

36 (Previously Presented): The cell of claim 21, which comprises a fusion protein containing a TRF1 or TRF2 polypeptide.

37 (Previously Presented): The cell of claim 21, which comprises a fusion protein containing a centromere polypeptide.

38 (Previously Presented): The cell of claim 21, which comprises a fusion protein containing centromere protein A or centromere protein C.

39-40 (Cancelled)

41 (Previously Presented): The cell of Claim 21, which is a mammalian cell.

42 (Previously Presented): The cell of Claim 21, which is a somatic cell, a germ cell or an ES (embryonic stem) cell of a mammal.

43 (Currently Amended): A method for making a cell that may be division-visualized comprising:

transforming a cell with one or more polynucleotides which encode at least three different fusion proteins, wherein each fusion protein comprises a different fluorescent protein and different polypeptide involved with cell division,

~~wherein at least one fusion protein comprises a spindle protein~~

each of the fusion proteins provides a different type of fluorescence so that three or more types of cell structures can be fluorescently observed,

wherein at least one of the polypeptides involved in cell division is a spindle polypeptide selected from the group consisting of  $\alpha$ -tubulin and  $\beta$ -tubulin,, and

wherein said fusion proteins are expressed at a level sufficient to permit their visualization ~~during~~ through the process of cell division.

44 (Currently Amended): A method for visualizing cell division comprising:

maintaining a cell under conditions suitable for cell division, and

fluorescently visualizing said cell;

wherein said cell has been transformed with one or more polynucleotides which encode at least three different fusion proteins,

wherein each fusion protein comprises a different fluorescent protein and a different polypeptide involved with cell division,

~~wherein at least one fusion protein comprises a spindle protein,~~

each of the fusion proteins provides a different type of fluorescence so that three or more types of cell structures can be fluorescently observed,

wherein at least one of the polypeptides involved in cell division is a spindle polypeptide selected from the group consisting of  $\alpha$ -tubulin and  $\beta$ -tubulin, and  
wherein said fusion proteins are expressed at a level sufficient to permit their visualization through the process of ~~during~~ cell division.